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File Rocket Leaflet

50X1

PROGRESS REPORT

FOR

JANUARY 1956

ON

4-INCH ROCKET

ORIGINAL CL BY 235979
☐ DECL ☒ REVW ON 2010
EXT BYND 6 YRS BY SAME
REASON 3 d (3)

DOC 69 REV DATE 29 MAY 1980 BY 018373
ORIG COMP 56 OPI 56 TYPE 03
ORIG CLASS M PAGES 3 REV CLASS C
JUST 22 NEXT REV 2010 AUTH: HR 70-2

1210-E-1

February 20, 1956

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During January further work was done redesigning the rocket head to permit equalization of pressure to take place quicker and more readily. This was accomplished by increasing the area of the cross-bored connecting holes. This method of construction caused an increased force resulting in rupture of the head. To compensate, a central reinforced core was inserted and tested statically. Following the two successful static tests, the design was made into two flight models. These burst, probably due to increased stresses during flight. The core, of cloth phenolic material, was next made of glass cloth reinforced polyester. Models were flown using this type core and were structurally all right but were unstable because of insufficient pressure equalization. A third model made of aluminum and with larger ports for better pressure equalization, although still somewhat unstable, had the best flight to date.

Work has progressed on the design of the payload ejection system. At present the ejection method is similar to that of a mortar. This method provides more payload space and since the payload is ejected forward, a proportional rearward force is generated, thus reducing the velocity of the motor section. Successful transfer of flame from the timing unit to the ejection powder charge has been accomplished, thus bringing the over-all method ready for flight trials.

Future Work

Further work will be done using carbon as a nozzle material. At present it appears that carbon nozzles function satisfactorily and in addition are much easier to fabricate than present types.

New model designs will be studied in an effort to eliminate present problems in attaining pressure equalization.

Financial Statement

Total Amount of Contract (Phases I and II)	
Expended in Phase I	
Balance for Phase II	

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Financial Statement (continued)

Obligations for January, 1956 [redacted] 50X1

Obligations to January 31, 1956 (Phase II)

Balance of Phase II

The revision in computation methods better illustrates the expenditures on Phase II at [redacted] The balance reflects a bookkeeping credit of [redacted] 50X1 50X1

Expiration Date - February 1, 1956 (Extension in time has been requested.)

Logged 2/29 mt.

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